

At the present price of labor and materials, however, this same job would be 35 or 40 per cent higher. Regardless of cost, it is money well spent. A structure of this size would cost the taxpayers at least \$50,000 to replace, and it is impossible to purchase one at any price under the present war conditions.

A desirable plan is to go out each year, after the spring rains, and clean out around the end-posts of all steel structures. Gravel, dirt, vegetation, and moisture will collect at these places, and if not removed will cause serious damage to the structure. A little paint or asphalt applied to these end-post footings will assist materially in lengthening the life of a bridge.

## CONSERVING OUR EQUIPMENT

Glen Brown,  
Huntington County Road Supervisor

Many of us probably thought we knew quite a lot about maintaining highway equipment before Pearl Harbor, but this war has really put us through school. We feel confident that we can master the course, most of which we will have to lay out for ourselves; but by the time this war is over, we will have an interesting background. I believe our experience will have a profound effect upon the future care and maintenance of highway equipment. A new program will have been born to parallel that now used by operators of large commercial fleets. When, in Road Schools such as this, we pool our experiences, I am sure that repair of highway equipment will reach an efficiency never dreamed of before the Nazi and Jap joined forces against us.

To be more specific, these conditions that often make it impossible for us to get replacement parts have thrown the spotlight on the maintenance man in a dramatic manner. The drama is heightened by the lack of actors (or mechanics) on the maintenance stage. There are simply not enough good men to go around. To my mind the most important factor at this time, in connection with the operation of a County Highway Department and the conservation of highway equipment, is the employment of good mechanics and the maintenance of a well-equipped garage. While our garage is not equipped as well as some, or as well as we would like to have it, we have installed in it the following:

One lathe, one drill press, one electric drill, one mechanical hack saw, three emery wheels of different sizes, one electric welder, one acetylene welder, one forge with electric blower and a full set of blacksmith tools, one pressure grease gun with fittings for proper lubrication, one garage compressor, and numerous small tools.

We also keep in our storeroom a supply of gaskets, fan belts, and other repair items, which are needed frequently and promptly.

Our mechanic has full charge of the garage. He opens up in the morning, builds fires, pumps gasoline, and keeps a record of all gasoline used, charging it out against each piece of equipment. It is our policy to grease and lubricate our trucks every thousand miles, at which time the truck is gone over very carefully by our mechanic, tires are inspected, and all necessary repairs are made. No new parts are bought when it is possible to repair the old ones. With our electric welder we weld frames, fenders, engine blocks, and many other parts, which otherwise would go to the junk pile. In spite of our large mileage of gravel roads—that can be kept in condition for traffic only by grading with reasonable frequency—the stock of grader blades runs very low. Our grader blades, worn down unevenly in service, are now being welded back-to-back and again put in service. We have very little breakage of these blades.

In order to conserve rubber our tires are retreaded and recapped, a process we have found to be very economical and from which we have received very good mileage. We have found it profitable to switch our tires from one wheel to another in order to get longer service out of them, and we have also cut the speed of our vehicles to thirty miles per hour. We do not know what this war tire will do for us, nor how much service it will give, since we have just made our first purchases of these tires.

Joseph B. Eastman, Director of the Office of Defense Transportation, in a statement to the Automotive Council of War Production recently declared: "Automotive transportation is absolutely essential to the winning of the war. Goods must reach their destination, and workers must get to their jobs on time. Mechanics and servicemen, in maintaining and conserving both vehicles and tires, are performing a most important function in the nation's war effort."

In the face of the foregoing statement, it would seem that it behooves us, as supervisors of highway departments, in order to conserve our highway equipment, to adopt the following program:

1. Employ good mechanics.
2. See that all machinery is properly greased and lubricated as needed.
3. Discard no parts that can be repaired and again put into service.
4. Have our tires and trucks inspected every thousand miles and necessary repairs made.

If we do this, I am sure that we will go a long way in releasing many items to the mechanized army and make a direct contribution to our war effort.